8903

Diag. Cht. No. 1210-3.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WH-10-2-66 *Office No.* H-8903

LOCALITY

State Massachusetts

General locality South Coast

Locality Vineyard Sound

19 66

CHIEF OF PARTY

S. C. Miller

LIBRARY & ARCHIVES

DATE June 19, 1968

USCOMM-DC 37022-P66

8903

FORM C&GS-537
(8-15-59)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

H-8903

HYDROGRAPHIC TITLE SHEET

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.
WH-10-2-66

State Massachusetts

General locality South Coast

Locality Vineyard Sound

Scale 1:10000 Date of survey 1966

Instructions dated 11 March 1966 Project No. OPR-369

Vessel USC&GSS WHITING (CSS-29)

Chief of party Sidney C. Miller, LCRD, USESSA

Surveyed by LCDR. S.C.MILLER, LCDR. R.A.TRAUSCHKE, ENS P.F.DEAN, LTJG K.W.KIENINGER

Soundings taken by echo sounder, ~~hand lead~~, pole

Graphic record scaled by Ships Personnel

Graphic record checked by Ships Personnel & Norfolk Processing Branch

Protracted by Harry R. Smith

Soundings penciled by Harry R. Smith

Soundings in ~~fathoms~~ feet at MLW ~~MkW~~

REMARKS:

K.W.K. 10/23/91

J. T. G.

USCOMM-DC 8272-P62

Descriptive Report to Accompany
Hydrographic Survey H-8903 (WH-10-2-66)
Survey Vessel: USC&GSS WHITING CSS-29
Chief of Party: LCDR S. C. Miller, US ESSA
Scale 1:10,000 Year: 1966

Surveyed by:

LCDR S. C. Miller
LCDR R. A. Trauschke
LTJG K. W. Kieninger
ENS P. F. Dean

A. Project

The authority for this survey is contained in Basic Project Instructions, 2100 B-pt 5-2-WH, dtd 11 MAR 1963, supplemented by Supplemental Instructions: Project OPR-369, Vineyard Sound, Massachusetts, dtd 13 JUN 1966. ✓

B. Area Surveyed

The area surveyed is on the South Coast of Massachusetts included between the Latitudes 41°29'50"N and 41°26'05"N and Longitudes 70°40'W and 70°49'50"W. The survey covers the area from the Northwest shore of Martha's Vineyard Northwestward to the Southeast shore of Naushon Island and Pasque Island of the Elizabeth Island Group. Middle Ground shoal and Lucas Shoal are surveyed in part on this sheet along with the Southern portion of Robinsons Hole. The Survey began on 7 JUL 1966 and ended 26 August 1966. ✓

Junction with contemporary surveys are as follows:

WH-10-1-66	1:10000	1966	(H-8902)
WH-10-3-66	1:10000	1966	(H-8904) ✓
WH-10-4-66	1:10000	1966	Not registered 9-6-'68
WH-20-2-66	1:20000	1966	(H-8905)

C. Sounding Vessels

WHITING using purple ink. WHITING Launch I using blue ink.

D. Sounding Equipment

Both the Ship and Launch I used Raytheon DE-723 fathometers during this project -

WHITING	Fathometer S/N 249 and 262
Launch I	Fathometer S/N 213 and 250

Corrections for fathometer in the launch were obtained from bar checks averaged over a selected time interval. Corrections for fathometer on the ship were obtained from velocity corrections curve compiled from Leadline comparisons and Temperature/Salinity Data. All fathometer corrections are presented in Tables.

E. Smooth Sheet

The smooth sheet will be compiled by the processing office of the Atlantic Marine Center.

F. Control

Visual control was used for positioning control for all work on this sheet. Photogrammetric and triangulation points were used in conjunction with sextants to determine three point fixes that were then plotted on the boat sheet by the use of a three-arm protractor.

The photogrammetric points were located by a photogrammetrist attached to a sub-unit of Photo Party No. 62. The following photogrammetric compilations were used:

Advanced Manuscripts	
T-12474	OCT 1963
T-12475	OCT 1963
T-11212	MAY 1966
T-11213	MAY 1966
T-12473	Oct 1963

The ship used a signal from HI-FIX NOB located in Woods Hole Massachusetts as steering aid in running visual Hydrography.

G. Shoreline

The shoreline was transferred from manuscripts T-12473 T-12474, T-12475, T-11212, and T-11213.

The transfer of the shoreline and the topographic details were verified by the photogrammetrist. The low water line was not verified because of the boulder-strewn condition prevalent along the coast.

H. Crosslines

Crosslines were run on 8% of the sheet and are in good agreement.

I. Junctions

The junctions with H-8902 WH-10-1-66, H-8904 WH-10-3-66 and H-8905 WH-20-2-66, are in good agreement, the soundings generally agreeing within one or two feet.

J. Comparison with prior survey

Prior surveys are in general agreement with this survey, except as noted below:

Prior surveys are as follows:

H-1832	1:20000	1887
H-2274	1:10000	1896
H-2540	1:10000	1901
H-2852	1:20000	1906

For additional ptiot sutveys see "REVIEW"

1. Pre-Survey Review. Lucas Shoal and Middle Ground Shoal

The area West, North, and East of Martha's Vineyard is characterized by several elongated shoals which rise abruptly from general depths of 40 to 60 feet. These shoals are unstable.

Geological Background of Area. The area is a mature submergence coastline which has been cut by a very strong off-shore current. Underlying Martha's Vineyard and Naushon Island are low ridges of Tertiary rock, for the most part covered by glacial deposits. These glacial deposits are terminal moraines with a knob and kettle topography. The position of the terminal moraines

suggests that the underlying Tertiary ridges may have been influential in causing the ice to terminate at this point. The local relief within the moraines exceeds one hundred feet, and the total thickness is several hundred feet. Many erratics and large number of rocks up to boulder size are present in the drift. The main moraines are from five to eight miles apart and run parellel to the coast separated by the submerged lowlands of Vineyard Sound. Middle Ground Shoal and Lucas Shoal may be remains of a recessional moraine or a drumlin.

A strong tidal current passes through Vineyard Sound, the flood current moves eastward and the ebb current westward. The current reaches a maximum strength of up to 3 knots, and acts as a cut and deposit agent in the area. Middle Ground and Lucas Shoal divide the Sound into two areas, each having somewhat independent systems of currents.

The Sound in many areas is boulder-strewn from the glacial deposits. There are large amounts of drift material which may be transported by the current, and areas where the boulders have formed a deposit which acts as a buffer against erosion. The shoals are ridges of either rock or hard sand, and are subject to changes in shape and depth.

Considerable changes occurred in the shoals from the period of the first survey in 1887 (1832, 1:20000) to second survey in 1906 (2852 1:20000). This trend of change has continued over the last sixty years. (First survey was H-163 in 1845-46)

Lucas Shoal, north of the sheet limit, has retained its shape with a very small migration to the on the south, ~~East~~ northwest. The depth of the water over the shoal ~~was~~ is two to four feet more than in 1906. The least depth on Lucas Shoal ~~was~~ is ~~eighteen~~ nineteen feet.

The southern end of Middle Ground Shoal 41°26.3'N, and 70°42.2'W has, at the 30 foot curve, elongated in an East-West direction from .27 miles to .48 miles.

Some shoaling has taken place. Least depth on the southern end increased from seventeen feet to eighteen feet.

From the southern end of the shoal to the limit of the sheet at 41°28'N, the shoal has shifted to the southeast .15 miles, maximum, since 1906. Least depth on shoal is 12 feet, within limits of this survey.

Robinsons Hole, (41°26'45"N, and 70°48'15"), shows a shoal sounding of 5 feet on the survey H-2540 (1901) (~~2540~~ 1:10000). Very strong currents are present in the Hole, strong enough to pull channel markers under at flood and ebb. A two hour search with a launch for the five foot depth produced a shoal sounding of seven feet.

This 5 ft. sounding, plotted on H-2540 (1901) is from the records of H-1832 (1887)

Note "Recommend." Par. "P"

Norton Rock, (41°26'05"N and 70°42'20"W), shown on H-1832 ~~the survey of~~ (1887) ~~(1832)~~ as a six foot rock was not found. Norton Rock was first charted as Elijas Rock. A four hour search of the area with launch and skiff with diver with search rope showed no indication of rock or six foot shoal in area. The water was clear; visibility 25 feet. The diver made a 50 meter sweep of area from charted position. The bottom in this area is boulder strewn. (Norton Rock shown also on H-163 [1845])

Existence of rock confirmed by trace on turn 79-90 aa

Except as noted above, the comparison with prior surveys is in general agreement.

K. Comparison with the Chart

The Survey has been compared with the following charts:

USC&GS Chart 263 of OCT 1958 1:12000
USC&GS Chart 264 of AUG 1963 1:40000

See Reviewer's Comparison with Charts 263 and 249

With the exceptions listed in "J", and below, the survey closely agrees with the chart of the area. It is expected that when the soundings are reduced and plotted on the smooth sheet, many small discrepancies between the different days of sounding, the different sounding vessels, and the boat sheet and chart, will be resolved.

Bare boulder considered disproved by field investigation

The Advanced Manuscript T 11213 showed a possible rock, one foot, or greater above MHW, at 41°25"48" and 70° 42"31'. The chart of area and prior surveys showed no rock in the area. A three hour search with the launch and skiff with diver using a search rope, showed no indication of rock. The area is boulder strewn and has many rocks that rise six feet from the bottom. Recommend no change in the Chart ~~263~~ 249 and 264

Must mean: Lat. 41°25.48' Long. 70°42.51'

It was not mentioned in records after a 3 hr. field investigation - Not plotted on Smooth sheet No. 2

Chart 264 shows a 61 foot sounding in the area around Naushon lighted bell buoy "28" off the south ~~east~~ west end of Naushon Island. This 61 foot sounding appears to be taken from an isolated 61 foot sounding found on the survey of 1887. Shoalest sounding found by this survey in the area was 72 foot. Recommend that 61 foot sounding be held because of the boulder strewn character of the area.

Delete 61 probably in error - no boulders on figure only sand ridges

L. Adequacy of Survey

This survey is considered complete and adequate to supersede prior surveys for charting with two exceptions, Robinson's Hole and Norton Rock. See recommendations.

M. Aids to Navigation

The location and characteristics of the aids to navigation in the area of the survey have been compared with the light list and Chart 26~~3~~4. Determined positions agree closely with indicated positions except as listed below:

Naushon Lighted Bell Buoy "28" is shown in the Light List and on the Chart as being in 60 feet of water. This survey found to be in 77 feet of water.

Tarpaulin Cove Black Can Buoy "1" is shown in the Light List as being in 24 feet of water. This survey found it in 15 feet of water.

Tarpaulin Cove Rock Buoy shown in Light List in 10 feet of water off east side of rock. This survey found buoy in 13 feet of water NNE 175 meters from rock

Also within limits of this survey, 1966 Light List Nos. 602, 603; and C "1", C "3", N "2" and N "4" buoys in Robinsons Hole

Aids to Navigation are considered adequate for the purpose for which they were established.

Vol I 1970
P118

N. Statistics

The total area surveyed amounted to 25.3 square miles (Nautical), with 498.9 nautical miles of sounding lines, ~~3729~~ 4384 positions, and 43 bottom samples.

Vessel	No. Positions	Miles of Sounding Lines	Bottom Samples
WHITING	705	140.1	40
Launch I	3679	358.8	3
Bottom Samples	43		

O. Miscellaneous

Total Positions:
None 4,427

P. Recommendations

It is recommended that Norton Rock (See Section J) be carried on chart until such time as location can be disproved by wiredrag.

It is recommended that the 5 foot mid channel sounding be retained in Robinson's Hole until such time as it can be disproved by wire drag.

Q. Reference to Reports

Landmarks for Charts and Fixed Aids to Navigation
Coast Pilot Report
Corrections to Echo Sounding
Electronic Control
Photogrammetry Report

Respectfully submitted:

Karl Wm. Kieninger
Karl Wm. Kieninger
LTJG USESSA

List Of Signals

WH-10-2-66

ACE T12474
ADO T11212
ALP NORTON BOULDER, 1943
AMY T12475
BED T11212
BIB T12475
BIG T11212
BOB T12474
BSER B7.B2, S7.S2 1943
CAT T11212
COP T12475
COW T12474
DEB T11212
DIP T12475
DOG T12474
DUDE DUDE 1948
EEL T12474
EGO T11212
ELM T12475
FEW T12475
FIT T11212
CAL T11212 FOE T-12474
GET T12474 GAL T-12474
GOB T12474
HER T12474
HID T12474
HUT T11212
IRA T11213
IRK T12474
ITS T11212
JAW HYDRO, Vol. IX, Page 30 PJ 13
JIM T11213
JUG T12474
JUT T12474
KED T11213
KIM T12474
LEG T12474
LIP T12474/3
LOW T11213
MAG T12474/3
MAR T12474
MUM T11213
NIG T12474
NOD T11213
ODD T12474 NUB T-12473
OFF T12474/3
ORB T11213
PAL T12474/3
PAM HYDRO, VOL XI Page 53
PIX T12474
POT T11213
QUO T12474
RAG T11213 RAM T-11213
RZB HYDRO, VOL ~~IX Page 42~~ 12 PJ 53
RAM RIM T12474
ROB T12474
SHE T11213
SHON Naushon, Southwest2, 1887
SIC T12474
SOW T12475
SQUE PASQUE, 1894
SIS T12474/3
TAN T12474
TAP T12474
TARP TARPULIN COVE LIGHTHOUSE, 1904
TOY T11212 TOM T-11213
TRY T12474/3
TUB T12475
VET T11212
VEX T12474
VIA T12474/3
WAD T11212
WAR T11212
WAY T12474
WED T12474/3
WHO T12475 WIG T-11213
YAM T11212
YEA T12474
YET T12475
ZAG T11212
ZIG T12475

TIDE NOTE

A portable automatic tide gage was used as a reference for tidal data for this survey, using 60° W (D+4) as the time meridian. It was located at Cedar Tree Neck, Martha's Vineyard, @ Lat. 41° 26' 06" & Long. 70° 41'51".

Mean low water was -3.7 ft. on the staff.

APPROVAL SHEET

The boat sheet and records for the area surveyed are complete and approved; the boat sheet and sounding volumes were examined daily during the survey. The area surveyed is complete and adequate for charting.

Sidney C. Miller
LCDR, USESSA
COMDG, USC&GSS WHITING

FORM C&GS-712
(3-9-64)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 17, 1967

[redacted] Atlantic Marine Center

Plane of reference approved in
20 volumes of sounding records for

HYDROGRAPHIC SHEET 8903

Locality: Vineyard Sound, Massachusetts

Chief of Party: S. C. Miller 1966

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Cedar Tree Neck, Massachusetts

Height of Mean High Water above Plane of Reference is as follows:

2.2 feet

Remarks

Tide reducers for the following positions have been revised in red and verified.

Volume	Position
IV	c1 - c 152
XIII	t1 - t 60
XIV	t61 - t 127

J M Symons
Chief, Tides and Currents Branch

USCOMM-DC 6680-P64

NORFOLK HYDROGRAPHIC PROCESSING BRANCH
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8903 (Wh 10-2-66)

GENERAL

Except for generally erratic launch courses in this area of strong currents and the rather frequent recording of weak fixes and incorrect signals, this appears to be an excellent basic survey. Soundings are in good agreement at crossings considering the irregular character of the bottom and the frequency of pinnacle rocks and scattered boulders.

Respectfully submitted,

Hugh L. Proffitt
Chief, Hydro Processing Br.

Norfolk, Va.
June 12, 1968

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8903

	Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
1	Cedar Tree Neck										1
2	French Watering Place										2
3	Lamberts Cove										3
4	Martha's Vineyard										4
5	Naushon Island										5
6	Naushon Point										6
7	Norton Head										7
8	Norton Point										8
9	Norton Rock										9
10	Pasque Island										10
11	Paul Point										11
12	Robinsons Hole										12
13	Tarpaulin Cove										13
14	Vineyard Sound										14
15											15
16					Names approved						16
17					July 31, 1968						17
18					Frank Mc Jackson						18
19											19
20											20
21											21
22											22
23											23
24											24
25											25
26											26
27											27

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8903

Records accompanying survey: Smooth sheets 1;

boat sheets 1; sounding vols. 20; wire drag vols. None;

Descriptive Reports 1; graphic recorder envelopes 1-Cahier

special reports, etc. 1-Fathometer Report

The following statistics will be submitted with the cartographer's report on the sheet:

		Verif.	Review
Number of positions on sheet		4384	4427
Number of positions checked		129	11
Number of positions revised		15	0
Number of positions revised (refers to depth only)		2	0
Number of soundings erroneously spaced		12	0
Number of signals erroneously plotted or transferred		None	0
Topographic details	Time	3 hrs	6 hrs
Junctions	Time	24 hrs	11 hrs
Verification of soundings from graphic record	Time	30 hrs	9 hrs
Special adjustments	Time	None	0

Verification by Fred. Bean. Total time 270 hrs Date 5/8/68

Reviewed by S. Rose Time 132 hrs Date 9-26-'68

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8903 FIELD NO. WH-10-2-66

Massachusetts -- South Coast -- Vineyard Sound

SURVEYED: July 7, 1966, through August 26, 1966

SCALE: 1:10,000 PROJECT NO.: OPR-369

SOUNDINGS: Raytheon DE-723 Depth Recorders CONTROL: Sextant Fixes on Shore Signals

Chief of Party	Sidney C. Miller
Surveyed by	S. C. Miller
	R. A. Trauschke
	K. W. Kieninger
	P. F. Dean
Protracted by	H. R. Smith
Soundings Plotted by	H. R. Smith
Verified and Inked by	Fred Bean (Norfolk)
Reviewed by	S. Rose
	Date: September 26, 1968
Inspected by	R. H. Carstens

1. Description of the Area

This is a survey of a portion of Vineyard Sound extending from Cedar Tree Neck, on Martha's Vineyard, westward to Pasque Island and northward to Naushon Island. The survey includes the approach from the south to Robinsons Hole; it includes, also, Lucas Shoal, Lamberts Cove and Tarpaulin Cove.

The bottom is unstable, and in many places has eroded since the previous survey in the year 1887. The shoals are sand covered ridges and constantly shift in position because of strong currents. The shoreline is boulder-strewn.

2. Control and Shoreline

The source of the control is adequately described in the Descriptive Report.

The shoreline originates with the following topographic manuscripts:

T-12473 (1961-63)
T-12474 (1961-63)
T-12475 (1961-63)
RS-818 (1966) (T-11212)
RS-819 (1966) (T-11213)

These are unreviewed advance manuscripts, except for RS-818 and RS-819.

The bare rock shown on survey RS-819 in lat. 41°25.48', long. 70°42.51' was searched for at low tide and by scuba diving. Since no indication of a bare rock was found at this position the rock is considered nonexistent.

3. Hydrography

A. Depths at crossings are in good agreement.

B. Standard depth curves are adequately delineated; however, the boulder-strewn shoreline prevented developing the low-water line and some of the 6-ft. curve by launch hydrography.

C. The development of the bottom configuration and least depths are adequate except over prior 52-ft. and 28-ft. depths in lat. 41°28.17', long. 70°43.3' and lat. 41°26.37', long. 70°48.5' respectively which have been carried forward for lack of disproval.

4. Condition of the Survey

The field plotting, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except that an abstract of the fathometer corrections was not entered in the Descriptive Report. During review, confirmation of the existence of Norton Rock was found on a fathogram on the turn of a line. Prior reading of this trace apparently had not been made.

5. Junctions

Junctions with the following surveys are in good agreement and were inked on the present survey:

H-8902 (1966) eastward
H-8904 (1966) westward
H-8905 (1966) southward

An additional junction, southward, with WH-10-4066 will be discussed in the review of that survey afters its receipt and registry in this office.

6. Comparison with Prior Surveys

H-163	(1845-46)	1:20,000
H-595	(1857)	1:20,000
H-1832	(1887)	1:20,000
H-2274	(1896)	1:10,000
H-2540	(1901)	1:10,000
H-2852	(1906)	1:20,000
H-2852a	(1908)	1:20,000
H-6348	(1938)	1:5,000

These surveys, in whole or in part, comprise the prior coverage of the present survey area. Survey H-1832 provides the last prior general coverage of the area and H-2852 and H-2852a provide the last prior coverage of the offlying shoals and ridges.

A comparison of the present survey with these prior surveys reveals the bottom to have deepened 2 to 5 ft. in many areas. Greater changes have occurred on Middle Ground and Lucas Shoal where the crests of the shoals have shifted variably in position and depth. A prior least depth on Middle Ground was 8 ft. in 1906 and is now 12 ft. The crest of Lucas Shoal has deepened about 6 ft. and has shifted about 0.1 mile to the northwest. Since 1887 a 14-ft. shoal shown on H-1832 in lat. 41°27.5', long. 70°41.8' has deepened to about 29 ft. Changes on these ridges and adjacent areas invalidate the retention of prior soundings for charting these features.

A number of prior soundings shoaler than present depths are found in the deeper areas. These are considered to be erratic soundings and are generally discredited by present depths as for example the following:

Prior Soundings (ft.)	Lat.	Long.	Present Depths (ft.)
62	41°28.88'	70°41.81'	66
61	41°28.5'	70°44.0'	69
57	41°27.3'	70°43.58'	62
63	41°26.44'	70°46.9'	79
61	41°26.32'	70°46.8'	80

The 28 charted in lat. 41°27.25', long. 70°40.5' from H-1832 was plotted in error on that survey. In its corrected position about 200 meters to the southward it confirms the present 30 ft. knoll. The 28 was replaced by a 26 from the records of H-1832.

Several soundings not considered disproved by the present survey have been retained to supplement present depths. With these additions the present survey is considered adequat to disprove the prior surveys within the common area.

7. Comparison with Chart 263, Third Ed., July 27, 1964 and with Chart 249, Twentieth Ed., June 24, 1968

A. Hydrography

The charted hydrography within the area of the present survey is from the previously discussed prior surveys, and from the boat sheet of the present survey.

The charted hydrography in several places is 2 to 7 feet shoaler than the present survey. This is due to the unstable bottom of sand ridges which constantly shift position. Depths applied from the present boat sheet are 1 to 3 ft. shoaler than smooth sheet depths because of fathometer corrections.

On Chart 263 at lat. 41°26.67', long. 70°48.08' a 16-ft. sounding originates with the boat sheet on which it is in error. The correctly reduced depth in that spot is 20 feet.

The 30-ft. curve, shown on Chart 249 stretching northeast of Lucas Shoal originates with H-2852 (1906). The present survey shows deeper water in this area and shortens the extent of this curve by 520 meters.

The following soundings, shown on Chart 249, originate with the boat sheet of this survey on which each one is in error: (all soundings are in feet)

Charted on 249 as:	Latitude North	Longitude West	Correctly reduces to:
71	41°27.00'	70°46.10'	91
70	41°27.25'	70°45.71'	77
76	41°27.09'	70°45.60'	80
64	41°28.41'	70°44.29'	77
51	41°27.53'	70°43.21'	60
12	41°28.49'	70°45.27'	16
23	41°27.10'	70°40.52'	32

The present survey supersedes the charted hydrography in the common area.

B. Aids to Navigation

The charted positions of aids to navigation within the limits of this survey adequately mark the features intended.

8. Compliance with Instructions

The present survey adequately complies with Project Instructions, except that close development is lacking over some charted shoals.

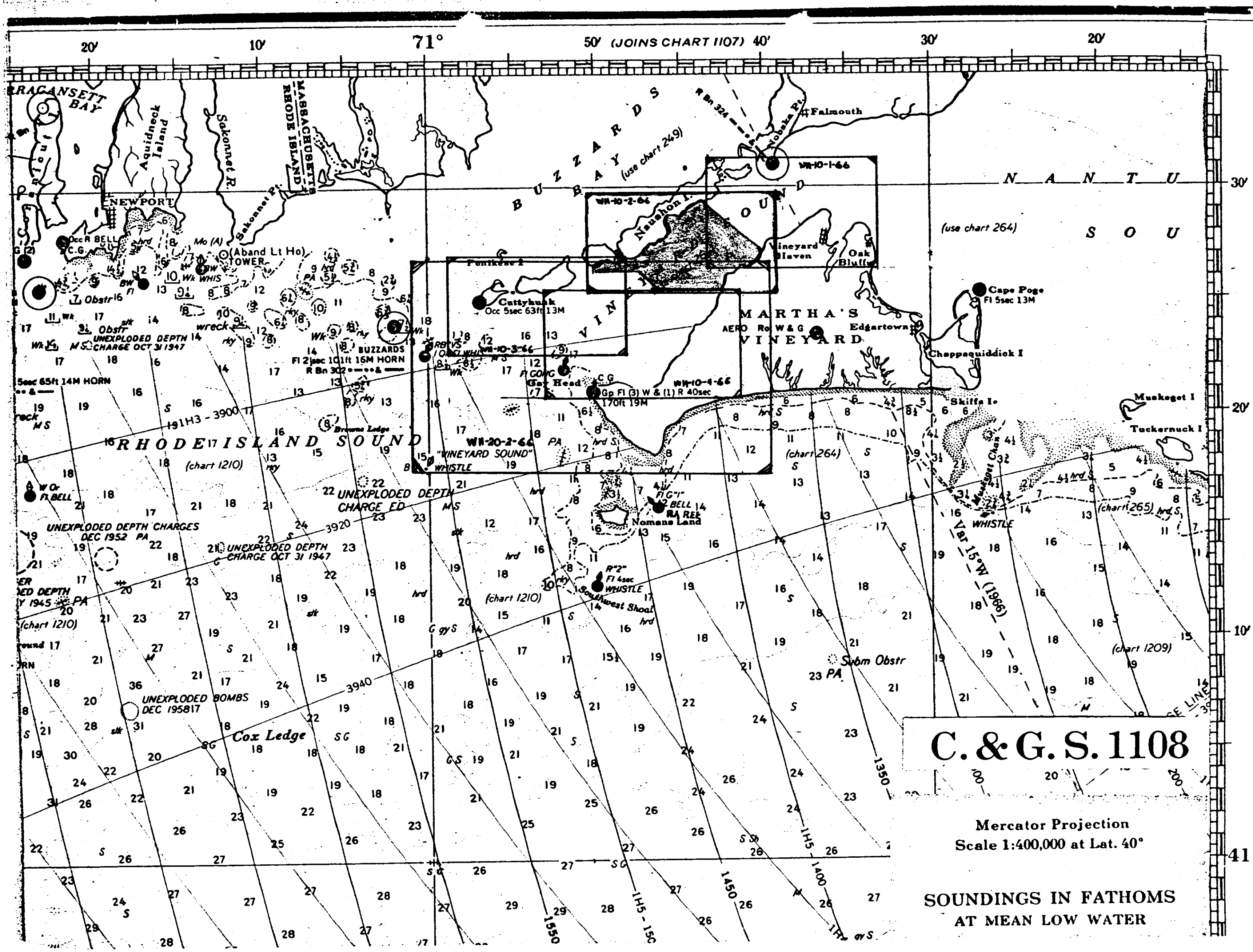
9. Additional Field Work

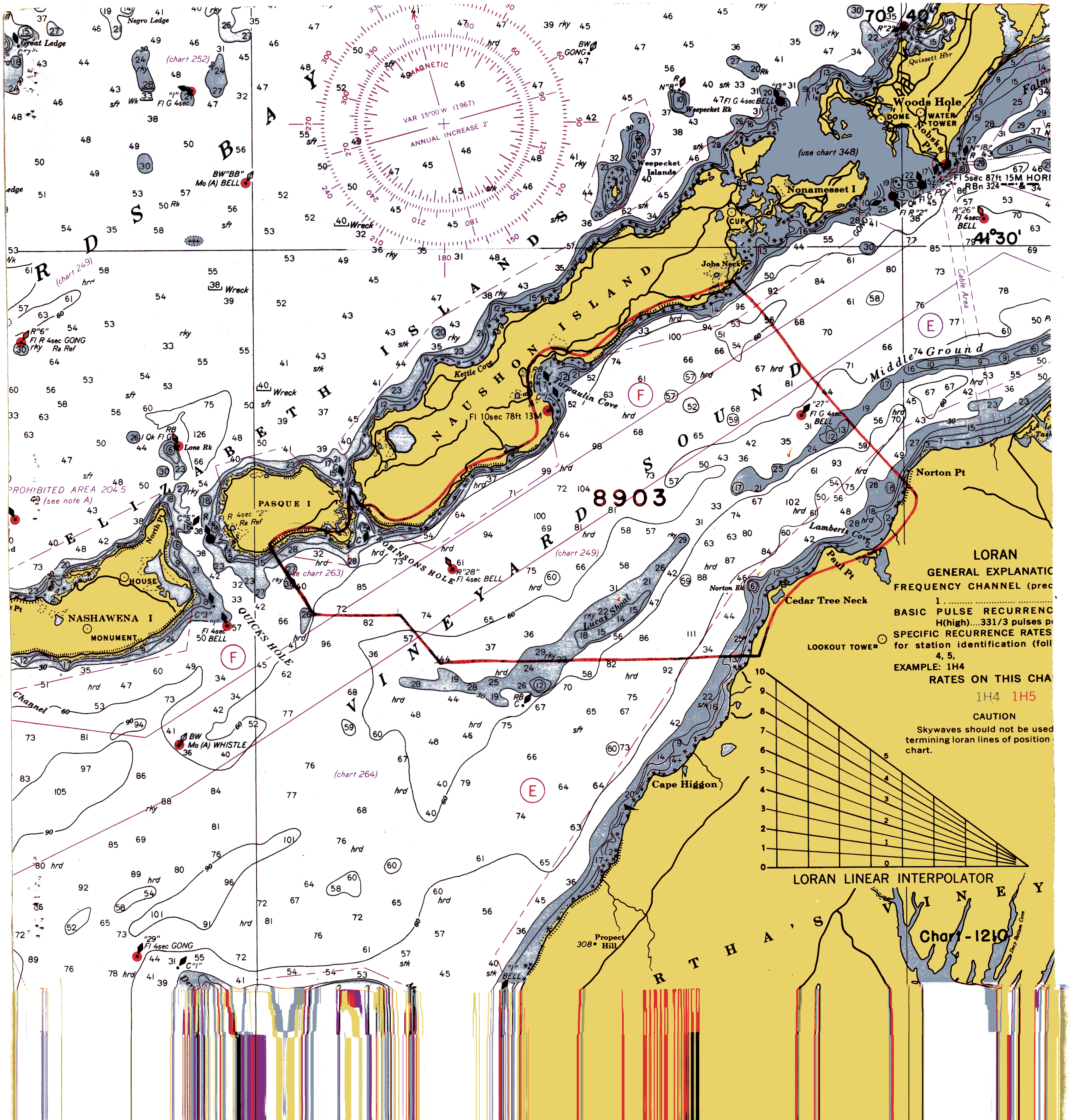
The present survey is a good basic survey. However, verification or disproval of the 28 and 52 ft. depths in lat. 41°26.37', long. 70°48.50' and lat. 41°28.17', long. 70°43.3' respectively would be desirable.

Examined and Approved:

Chief
Marine Chart Division

Associate Director
Office of Marine Surveys
and Maps


(JOINS CHART 1107)
BUZZARDS BAY
(use chart 249)
NANTUCKET SOUND
(use chart 264)
VINEYARD SOUND
RHODE ISLAND SOUND
MARTHA'S VINEYARD
MASSACHUSETTS
RHODE ISLAND
NEWPORT
Aquidneck Island
Sakonnet R.
Falmouth
Cuttyhunk
Gay Head
Nomans Land
Edgartown
Vineyard Haven
Oak Bluffs
Cape Poge
Chappaquiddick I
Muskeget I
Tuckernuck I
Cox Ledge
UNEXPLODED DEPTH CHARGES DEC 1952 PA
UNEXPLODED DEPTH CHARGE OCT 31 1947
UNEXPLODED BOMBS DEC 1958
Var 15°W (1966)
C. & G. S. 1108
Mercator Projection
Scale 1:400,000 at Lat. 40°
SOUNDINGS IN FATHOMS
AT MEAN LOW WATER



Negro Ledge
Great Ledge
(chart 252)
BUZZARDS BAY
MAGNETIC
VAR 15°00'W (1967)
ANNUAL INCREASE 2'
BW"BB"
Mo (A) BELL
BW
GONG
N"8"
Weepecket Rk
"13"
Fl G 4sec BELL
Weepecket Islands
(use chart 348)
Quissett Hbr
Woods Hole
DOME
WATER TOWER
Nobska Pt
N"18"
Fl 5sec 87ft 15M HORN
RBn 324
Nonamesset I
CUP
Fl R"2"
R"26"
Fl 4sec BELL
70°40'
41°30'
Jobs Neck
Cable Area
(chart 249)
R"6"
Fl R 4sec GONG
Ra Ref
Wreck
ELIZABETH ISLANDS
NAUSHON ISLAND
Kettle Cove
Tarpaulin Cove
Fl 10sec 78ft 13M
Middle Ground
Lone Rk
PROHIBITED AREA 204.5
(see note A)
North Pt
PASQUE I
Fl R 4sec "2"
Ra Ref
ROBINSONS HOLE
(see chart 263)
R"28"
Fl 4sec BELL
NASHAWENA I
HOUSE
MONUMENT
C"3"
Fl 4sec
50 BELL
QUICKS HOLE
Channel
VINEYARD SOUND
8903
"27"
Fl G 4sec
BELL
Norton Pt
Lamberts Cove
Paul Pt
Norton Rk
Cedar Tree Neck
Lucas Shoal
BW
Mo (A) WHISTLE
(chart 264)
"29"
Fl 4sec GONG
C"1"
"1"
BELL
Cape Higgon
Propect Hill
308
MARTHA'S VINEYARD
Chart - 1210
Deep Bottom Cove
LORAN
GENERAL EXPLANATIC
FREQUENCY CHANNEL (prec
1
BASIC PULSE RECURRENC
H(high)....331/3 pulses p
SPECIFIC RECURRENCE RATES
for station identification (foll
4, 5,
EXAMPLE: 1H4
RATES ON THIS CHA
1H4 1H5
LOOKOUT TOWER
CAUTION
Skywaves should not be used
termining loran lines of position
chart.
LORAN LINEAR INTERPOLATOR

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8903

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
1210	8/8/68	B Fernandes	[redacted] Part [redacted] After Verification [redacted] Signed Via
			Drawing No.
263	8-19-68	H. Radden	~~Full~~ Part ~~Before~~ After Verification before Review Inspection Signed Via
			Drawing No. #7 Added a few sdgs & revised curves
264	9/12/68	J. McMillan	~~Full~~ Part ~~Before~~ After Verification before Review Inspection Signed Via
			Drawing No. Critical Correction appd only before Review & inspection
114-SC	10/8/68	L. Van Zant	~~Full~~ Part ~~Before~~ After Verification before Review Inspection Signed Via
			Drawing No. appd thru Cht 264 drwg #5
260	9/23/69	J. McMillan	~~Full~~ Part ~~Before~~ After Verification Review before Inspection Signed Via
			Drawing No. #6. CRITICAL CORRECTION ONLY, ~~Full~~ application schedule for LATER
260	4-22-70	Irene Beeler	Full ~~Part Before~~ After Verification Review before Inspection Signed Via
			Drawing No. Full revision of sdgs + curves
263	4-22-70	Irene Beeler	Full ~~Part Before~~ After Verification Review before Inspection Signed Via
			Drawing No. Full revision of sdgs + curves
249	4-22-70	Jeffrey Stuart	~~Full~~ Part ~~Part Before~~ After Verification Review before Inspection Signed Via
			Drawing No. Applied thru larger Scale charts
			~~Full~~ Part ~~Before~~ After Verification Review before Inspection Signed Via
1210	4-26-70	Jeffrey Stuart	Drawing No. Critical Corrections only
263	8-12-70	Irene Beeler	Full ~~Part Before~~ After Verification Review Inspection Signed ~~Via~~ To
	9-16-70	Beverly Dugan	Drawing No. 8
260	8-14-70	Irene Beeler	Full After Verification, Review, Inspection
264	8-14-70	Irene Beeler	" " " " " Thru Chts 260 + 263
114-SC	8-25-70	James Graham	Revised sdgs. & curves thru cht. 249 Dwg. #32 & Cht. 264 Dwg. #6 & app'd partial inspection changes. Full application pending complete inspection changes
114-SC	1-19-71	H. Radden	Deleted 61 and added 81 after V&R

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975. USCOMM-DC 8558-P63

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8903

INSTRUCTIONS

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1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
1145C	1/21/71	R. D. Sanocki	~~Full~~ Part ~~Before~~ After Verification Review ~~Inspection~~ Signed Via Drawing No. 7 (Proof) Applied Inspection corrections made to smooth sheet.
249	1/26/71	R. D. Sanocki	~~Full~~ Part ~~Before~~ After Verification Review ~~Inspection~~ Signed Via Drawing No. 33. Applied Inspection corrections made to Smooth Sheet
264	1/71	R. D. Sanocki	~~Full~~ Part ~~Before~~ After Verification Review ~~Inspection~~ Signed Via Drawing No. 7 Applied corrections made to Smooth Sheet thru Cht. 249 dwg #33.
1210	Mar 71	R. D. Sanocki	~~Full~~ Part ~~Before~~ After Verification Review ~~Inspection~~ Signed Via Drawing No. 52 Applied thru cht. 249 dwg #33.
260	SEPT 71	K. GEAN	Full ~~Part Before~~ After Verification Review Inspection Signed Via ~~Drawing No.~~ 6 EXAM & APPLIED INSPECTION CHANGES
263	8-1-72	J. Bailey	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 8 FULLY APPLIED
260	3-28-73	J. Bailey	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 8 Fully Applied
264	4-4-73	J. Bailey	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 8 Applied in part thru Drwg. 263 #8 and Drwg. 260 #8 and in part directly from Smooth Sheet
1145C "D" INSETS 4 & 5, "E"	5-25-73	D. L. Poltilae	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. FULLY APPLIED
249	6-27-73	J. Bailey	Full ~~Part Before After Verification Review~~ Inspection Signed Via Drawing No. 35 Fully applied thru Drwg 114-SC #10 (Page E).
1210	9-24-73	John Bailey	Drwg. #55. Fully applied after Inspection Revised depth curves and sndgs. thru Drwg. 264 #8

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